

Timely Tsunami Information Via Satellite Shared With All Caribbean Nations

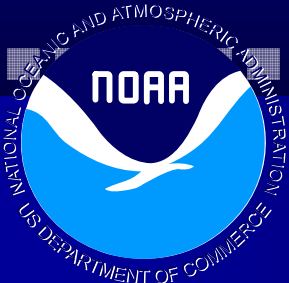
***Emergency Managers Weather
Information Network
(EMWIN)***

Bridgetown, Barbados – 1/9/06

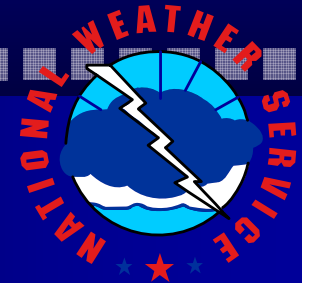
**Bill Proenza, Director
National Weather Service – Southern Region
Fort Worth, Texas, USA**

Tsunami

- "El Peligro Olvidado" - The Forgotten Danger
- Infrequent, but also a short-fused event
- Solution – Satellite Warning and Information System
 - EMWIN (Emergency Managers Weather Information Network)

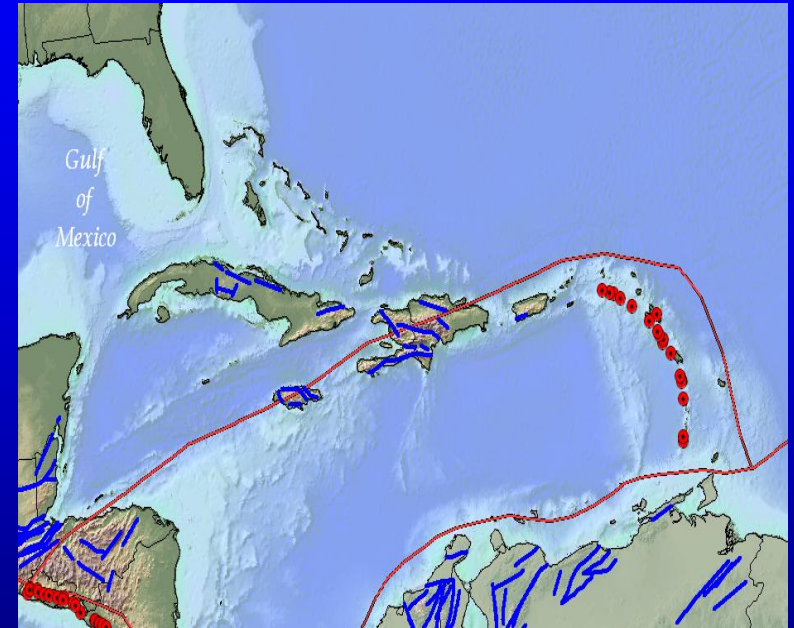


NWS SOUTHERN REGION
www.srh.weather.gov



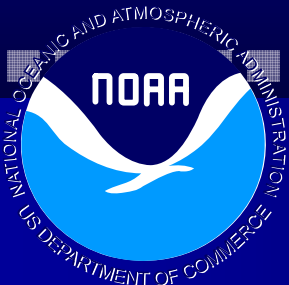
Caribbean Tsunamis

- More lives have been lost in the Caribbean due to drowning from tsunamis than from hurricane storm surge in the last 150 years.
- More than 25%* of the earth's total tsunami events occur in the Atlantic Ocean, north of the equator (including the entire Caribbean basin).
- Caribbean is geologically active

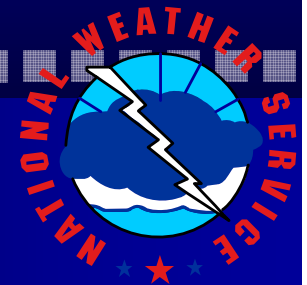


Volcano locations, fault lines, and plate boundaries in the Caribbean

*Bryant, E.A. *Natural Hazards*. Cambridge University Press, Cambridge, New York, Melbourne, 294 pp., 1991

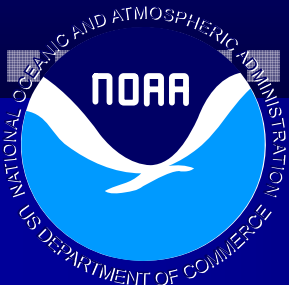
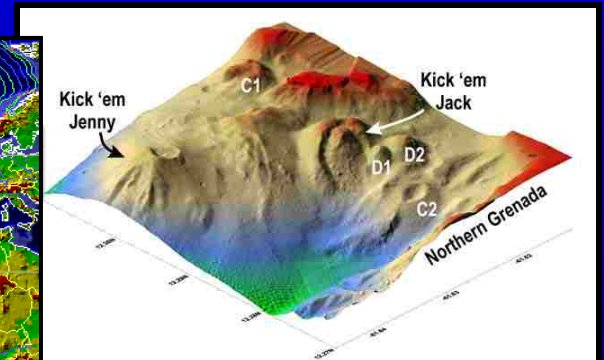
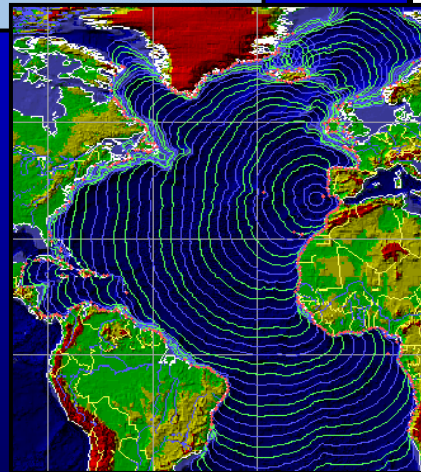
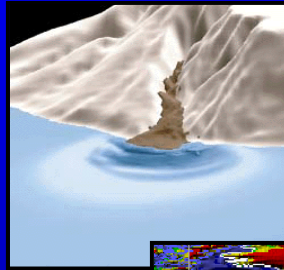


NWS SOUTHERN REGION
www.srh.weather.gov

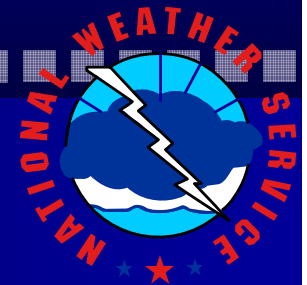


Most Caribbean Tsunami-genic Events are Nearby!

- Earthquake
- Landslide
- Submarine Volcano
- Tele-tsunami



NWS SOUTHERN REGION
www.srh.weather.gov

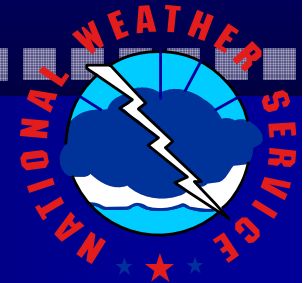


Timely Information is Key

- Timely/real time distribution of tsunami warnings and information that is easily accessible by all nations at a low cost is a vital key to ***saving lives***.



NWS SOUTHERN REGION
www.srh.weather.gov

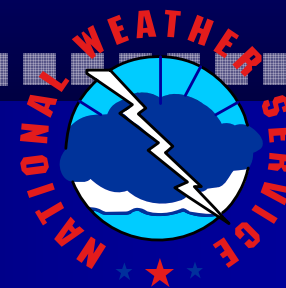


EMWIN – What is It ?

- A **FREE** data stream broadcast by National Weather Service (NWS) via NOAA GOES satellite.
- Near **REAL TIME** weather warnings, watches, advisories, statements, forecasts, weather maps, and satellite images.
- Data stream received via **PORTABLE** 3 foot diameter (1 meter) satellite dish.
- Information displayed and alarmed on **YOUR** computer.

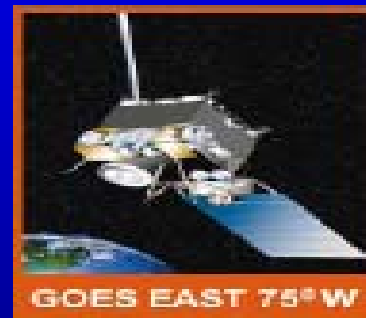


NWS SOUTHERN REGION
www.srh.weather.gov

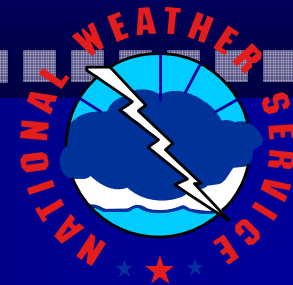


EMWIN – How does it Work ?

- Data received from NWS Weather Forecast Offices and Warning Centers.
- NWS data is transmitted up to NOAA Satellites (GOES 10 & 12).
- Data received via 3 Foot (1 Meter) dish.
- Data signal converted to text & graphical information that is displayed and alarmed on your PC.



NWS SOUTHERN REGION
www.srh.weather.gov

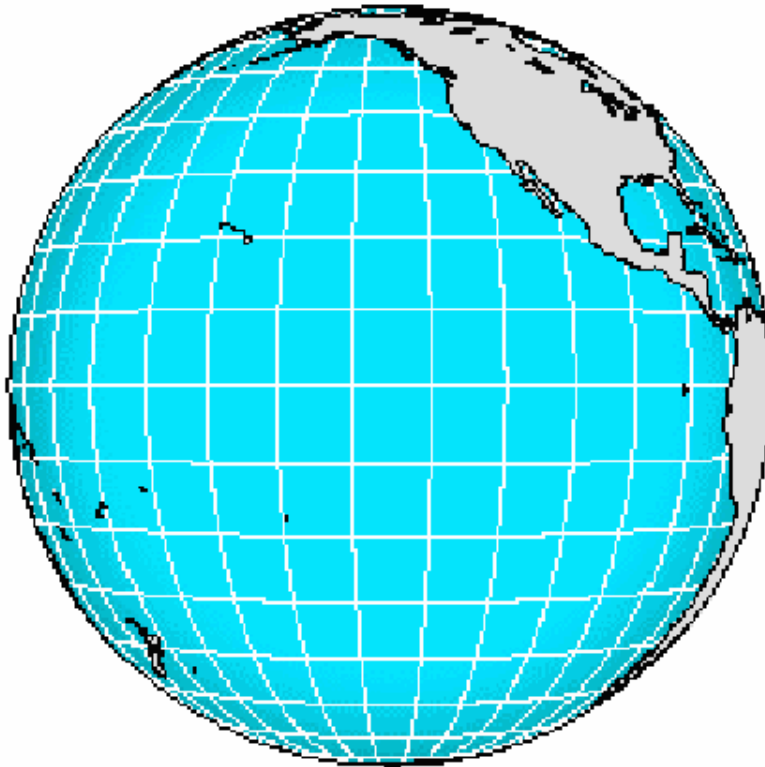




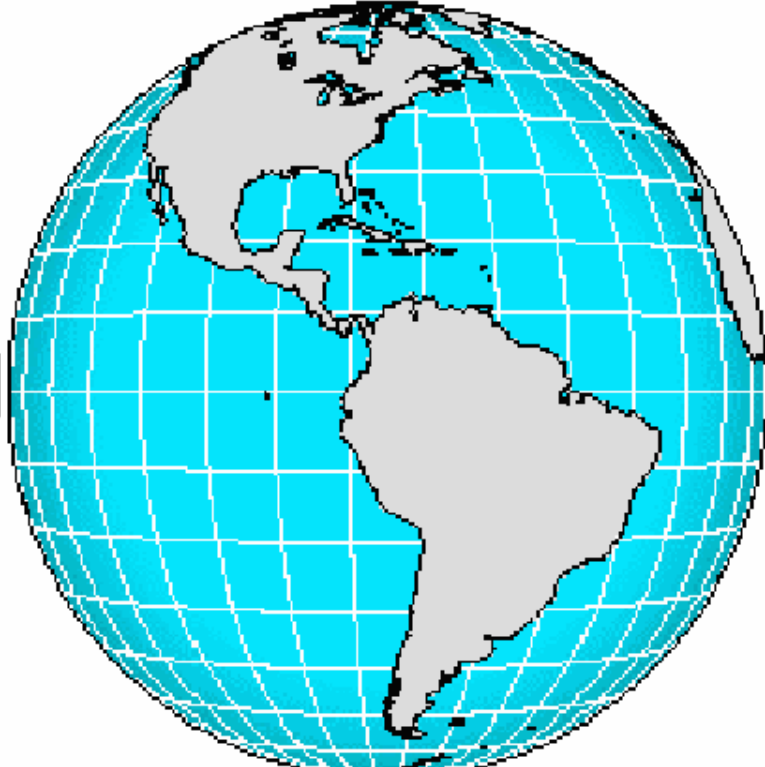
EMWIN Broadcast Coverage Area



GOES 10 (WEST)

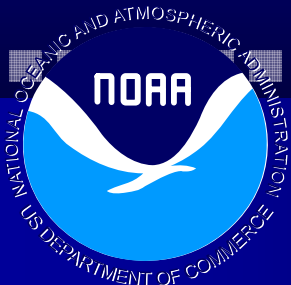
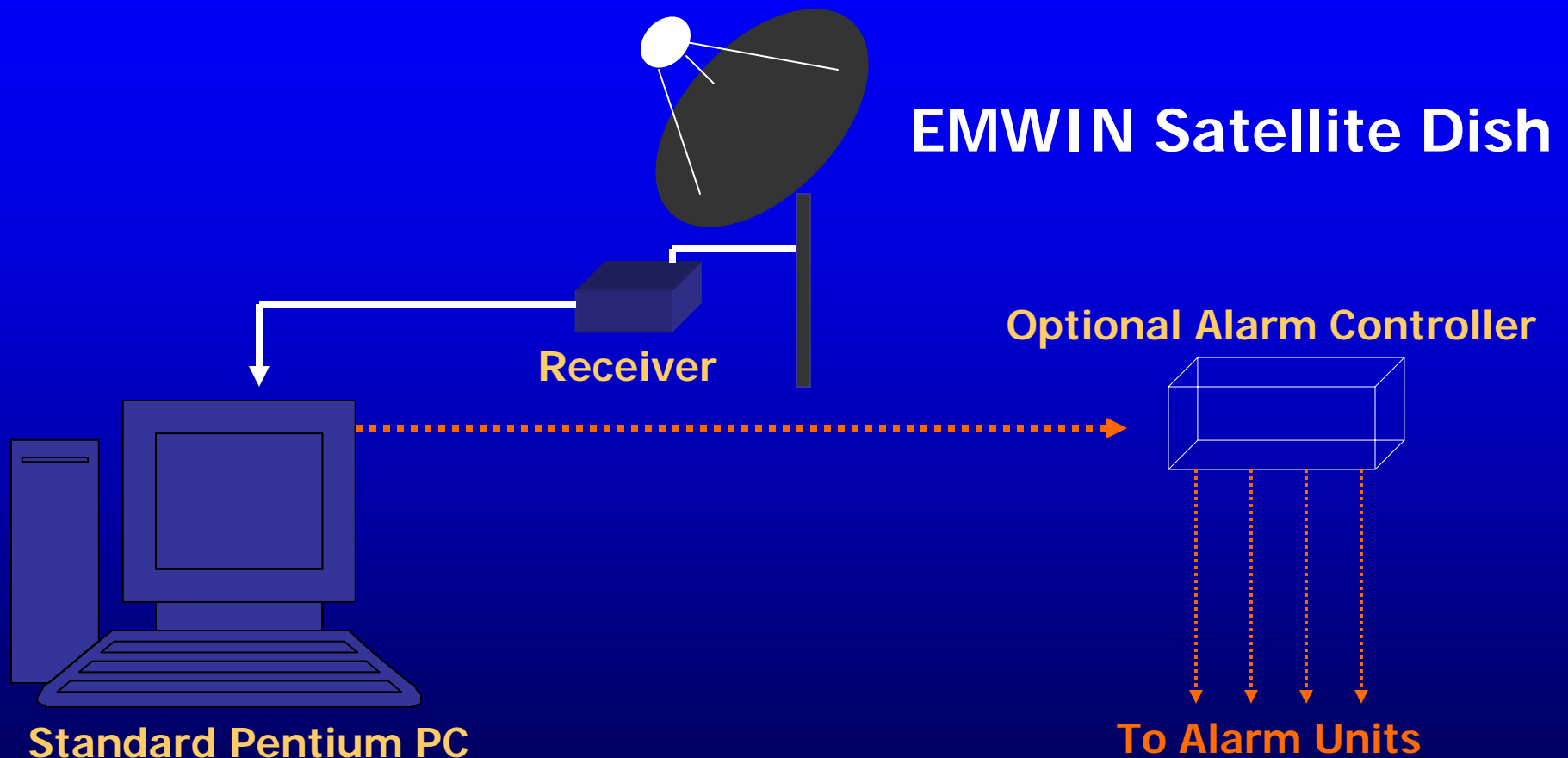


GOES 12 (EAST)

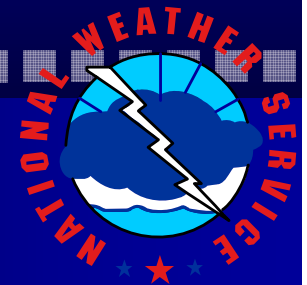


Coverage includes entire Caribbean !!!

EMWIN – How does it Work ?

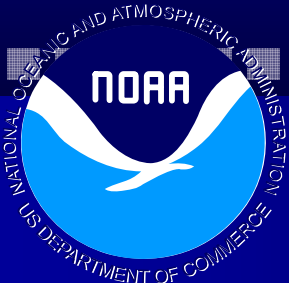


NWS SOUTHERN REGION
www.srh.weather.gov

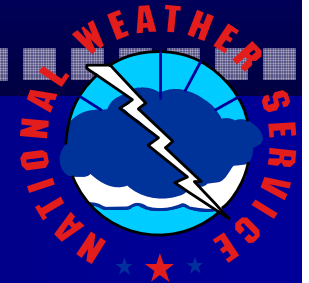


EMWIN – Hardware Requirements ?

- **3 Foot (1 Meter) Satellite Dish**
- **EMWIN Receiver**
- **Coaxial Cable**
- **Computer**
- **Vendors (*see web site*)**
 - **<http://iwin.nws.noaa.gov/emwin/winven.htm>**



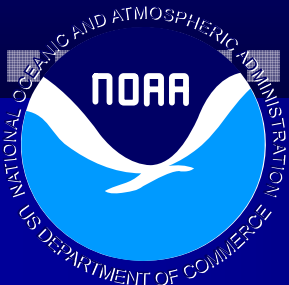
NWS SOUTHERN REGION
www.srh.weather.gov



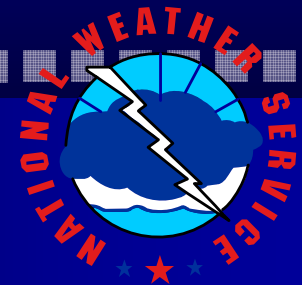
EMWIN – Software Requirements ?

- **Inexpensive** - Special software decodes the EMWIN data stream that flows at 9,600 baud. (~\$50 US Dollars)
- **Flexibility** - EMWIN software allows user to store, manage and display plethora of satellite delivered NWS products.
- **Availability** - From a host of *private* vendors
 - For more info, go to the follow NWS web site:

<http://iwin.nws.noaa.gov/emwin/winven.htm>



NWS SOUTHERN REGION
www.srh.weather.gov

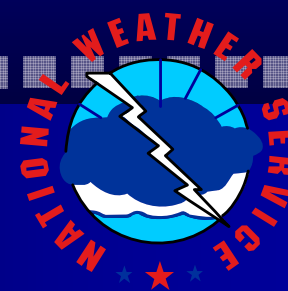


EMWIN – Costs ?

- Equipment Startup Cost ~ **\$2,000** (US)
- Computer ~ **\$1,000** (US)
- Monthly Data Fees - **NONE !**
- Future Enhancement Cost - **NOMINAL !**



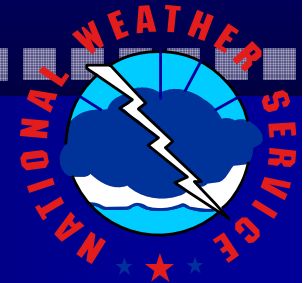
NWS SOUTHERN REGION
www.srh.weather.gov



EMWIN – Video

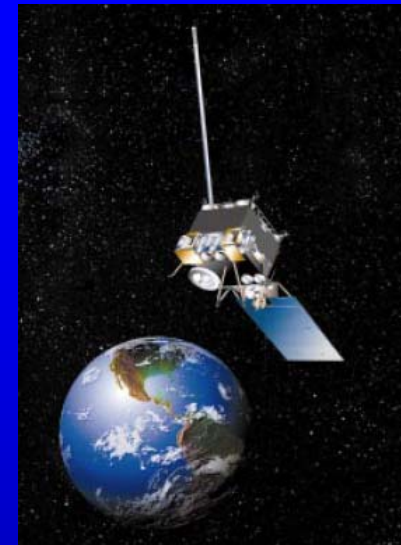


NWS SOUTHERN REGION
www.srh.weather.gov

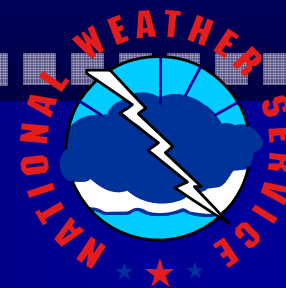


EMWIN – Benefits !

- **Minimal** Initial Investment
- **No** monthly fees – Data is **FREE**
- **Speed** and **Reliability** (GOES 12)
- **Updated** continuously 24 / 7
- **Portable** – Use at work, home or road
- **Configurable** Software (select what *you want*)
- **Alarm Capable** - Visible & Audible
- **Retransmission** – as your nation and/or agency needs

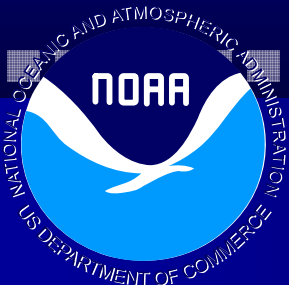


NWS SOUTHERN REGION
www.srh.weather.gov

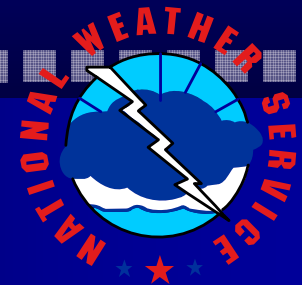


EMWIN – Coming Improvements !

- **GOES-N** will **double speed** of data to 19,200 baud and employ error correcting to improve data reliability.
- **EMWIN frequency** will be **compliant** with international standards and agreements.
- **EMWIN software** decoding upgrades - **FREE**.
- **Current hardware** (1 Meter Dish) **compliant** with future EMWIN upgrade.
- **Upgraded EMWIN system** – no later than **2011**.

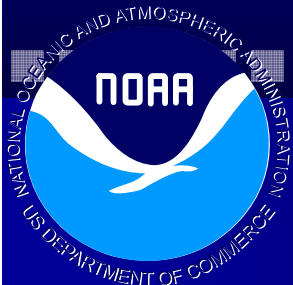


NWS SOUTHERN REGION
www.srh.weather.gov

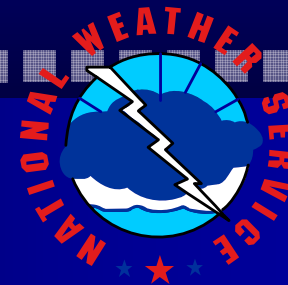


EMWIN – Summary !

- NWS warnings and data via instant satellite delivery
- NWS satellite delivered data stream
- Hardware / Software cost ~\$3000 USD
- Data is **FREE**
- 24/7 Continuous text / graphical data updates
- Portable dish and pc system
- Software configurable for warning alarms
- Future upgrades compatible with current hardware and international agreements



NWS SOUTHERN REGION
www.srh.weather.gov



EMWIN

Comments or Questions ?

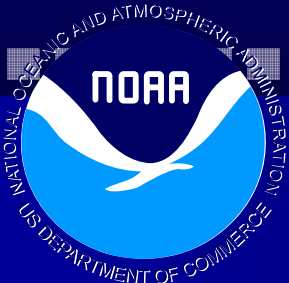
For more info – go to:

<http://iwin.nws.noaa.gov/emwin/index.htm>

Bill Proenza, Director

NWS – Southern Region

Fort Worth, Texas, USA



NWS SOUTHERN REGION
www.srh.weather.gov

